

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	HOOPMAN et al.)	Group Art Unit: 1722
)	
Serial No.:	09/520,032)	Examiner: Joseph DelSole
Confirmation No.:	9385)	
)	
Filed:	6 March 2000)	
)	
For:	TOOLS TO MANUFACTURE ABRASIVE ARTICLES		

APPELLANTS' BRIEF ON APPEAL

Assistant Commissioner for Patents
Mail Stop Appeal Brief – Patents
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Sir:

This Brief is presented in support of the Notice of Appeal filed herewith, from the rejection of claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 of the above-identified application under 35 U.S.C. § 102 (20, 21, 25-28, 33, 34, 36-45, 47-54, 94-96, 98, 99, 101-106, and 108-111) and 35 U.S.C. § 103 (claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111), as set forth in the Office Action mailed August 11, 2003. The current claims have been twice rejected (in the Final Rejection dated January 25, 2002, followed by the Advisory Action dated November 6, 2002, and the current Office Action dated August 11, 2003).

This Brief is being submitted in triplicate, as set forth in 37 C.F.R. § 1.192(a). Appellants hereby authorize a charge to Deposit Account No. 13-4894 in the amount of \$330.00 for filing this Brief under 37 C.F.R. § 1.17(f).

I. REAL PARTY IN INTEREST

The real party in interest of the above-identified patent application is the assignee, 3M Innovative Properties Company.

II. RELATED APPEALS AND INTERFERENCES

Appellants note that in the continuation application (U.S. Patent Application Serial No. 09/955,604) a Notice of Appeal, Request for Oral Hearing, and an Appeal Brief are being filed on even date herewith.

III. STATUS OF CLAIMS

Claim 19 has been indicated as allowed. Claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 are the subject of this Appeal (see Appendix I).

IV. STATUS OF AMENDMENTS

A Preliminary Amendment (dated April 23, 2001, a copy enclosed, see Appendix II) was filed in the above-identified application (which is a divisional application of Serial No. 09/259,488, filed February 26, 1999, issued as U.S. Patent 6,076,248 on June 20, 2000, which is a divisional application of Serial No. 08/940,267, filed September 29, 1997, issued as 6,129,540 on October 10, 2000, which is a continuation application of Serial No. 08/450,814, filed May 25, 1995, now abandoned, which is a divisional application of Serial No. 08/120,300, filed September 13, 1993, now abandoned) in which Appellants added claims 22-87.

A Supplemental Preliminary Amendment (dated May 4, 2001, a copy enclosed, see Appendix III) was filed in the above-identified application in which Appellants added claims 88-132 and amended previously submitted claims 23, 24, 56, and 57. A Continued Prosecution Application was filed by Appellants under 37 C.F.R. § 1.53(d) along with a Preliminary Amendment (dated August 23, 2001, a copy enclosed, see Appendix V) in response to an Office Action mailed May 23, 2001 (a copy enclosed, see Appendix IV), in which claims 1-132 were

subjected to a restriction requirement. Claims 14-54 and 88-111 were elected with traverse by Appellants' Representative. Additionally, claims 16, 17, and 19-21 were rejected under 35 U.S.C. § 112, second paragraph, claims 14-16, 18, 22-24, 29-32, 88-93, and 97 were rejected under 35 U.S.C. § 102(e), claims 17, 20, 25-28, 33-54, 94-96, 98-111 were rejected under 35 U.S.C. § 103, and claims 19 and 21 were rejected under the judicially created doctrine of obviousness-type double patenting over U.S. Patent No. 6,129,540. In that Preliminary Amendment (Appendix V), Appellants cancelled claims 1-16, 18, 22-24, 29-32, 88-93, 97, and 112-132, and amended claims 17, 19-21, 33-54, 98-111. Appellants also filed a Terminal Disclaimer (a copy enclosed, see Appendix VI).

A Supplemental Preliminary Amendment was filed by Appellants (dated September 18, 2001, a copy enclosed, see Appendix VII) in which Appellants cancelled claims 55-87, amended claims 17, 19-21, 25-27, 33-54, 94-96, and 98-111, and added claims 133-175.

A second nonfinal Office Action was mailed on September 27, 2001 (a copy enclosed, see Appendix VIII), in which claims 20, 21, 25-28, 33, 34, 36-45, 47-54, 94-96, 98, 99, 101-106, and 108-111 were rejected under 35 U.S.C. § 102(b), and claims 17, 20, 21, 33-54, and 98-111 were rejected under 35 U.S.C. § 103. Claim 19 was indicated as allowed. Claims 133-175 were withdrawn from consideration as nonelected subject matter.

Appellants filed an Amendment and Response (dated December 27, 2001, a copy enclosed, see Appendix IX) in which claims 17, 20-21, 25-28, 33-54, 94-96, 98-111, and 133-175 were amended. Each of the independent claims (except allowed claim 19) was amended to recite a production tool with a plurality of cavities, each of which has a single opening.

A final Office Action was mailed on January 25, 2002 (a copy enclosed, see Appendix X), in which the 35 U.S.C. §§ 102 and 103 rejections were maintained as described in the second nonfinal Office Action mailed on September 27, 2001. Also, several new rejections were presented. Claims 25-28 and 94-96 were rejected under 35 U.S.C. § 103, claim 40 was rejected under 35 U.S.C. § 112, second paragraph, and claims 17, 20, 21, 25-28, 33-54, 94-96,

and 98-111 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting.

A Notice of Appeal to the Board of Patent Appeals and Interferences (dated April 25, 2002, a copy enclosed, see Appendix XI) was filed via facsimile. Appellants filed an Appellants' Brief on Appeal (dated June 25, 2002, a copy enclosed, see Appendix XII) and received a Notice of Non-compliance with the Requirements of 37 C.F.R. § 1.192(e) (dated September 10, 2002, a copy enclosed, see Appendix XIII). In response, Appellants filed a replacement appeal brief, also titled Appellants' Brief on Appeal (dated October 10, 2002, a copy enclosed, see Appendix XIV) and an Amendment and Response Under 37 C.F.R. § 1.116 (dated October 10, 2002, a copy enclosed, see Appendix XV), in which claims 17, 20-21, 25-28, 33-54, 94-96, and 98-111 were amended, and claims 133-175 were cancelled. The amendments presented therein were entered as reported in an Advisory Action (dated November 6, 2002, a copy enclosed, see Appendix XVI).

A Reply Brief Under 37 C.F.R. § 1.193(b)(1) (dated March 12, 2003, a copy enclosed, see Appendix XVIII) was filed in response to the Examiner's Answer (mailed on January 14, 2003, a copy enclosed, see Appendix XVII).

Finally, a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 and Information Disclosure Statement (dated June 26, 2003, a copy enclosed, see Appendix XIX) were filed in order to reopen prosecution of the application before the Examiner. Appellants received an Order Dismissing Appeal (dated July 31, 2003, a copy enclosed, see Appendix XX). Appellants received an Office Action (dated August 11, 2003, a copy enclosed, see Appendix XXI) in response to the RCE.

All amendments were entered.

V. SUMMARY OF THE INVENTION

Appellants' invention is directed to a production tool for manufacturing an abrasive article. The production tool includes a plurality of cavities, each of which has a single opening. Various embodiments of the production tool are claimed.

Support for the pending claims can be found throughout the specification, including the originally filed claims and drawings, as would be clearly understood by one of skill in the art. Examples of locations of support for the pending claims are listed in the table below.

Claim 17	Support can be found, e.g., in originally filed claim 17; and in originally filed Figures 6 and 7.
Claim 20	Support can be found, e.g., in originally filed claim 20; and in originally filed Figures 6 and 7.
Claim 21	Support can be found, e.g., in originally filed claim 21; and in originally filed Figures 6 and 7.
Claim 25	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed Figures 6 and 7.
Claim 26	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed Figures 6 and 7.
Claim 27	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed Figures 6 and 7.
Claim 28	Support can be found, e.g., at page 6, line 18 through page 7, line 15; at page 19, lines 14-20; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; and in originally filed Figures 6 and 7.

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Claim 33-43	Support can be found, e.g., at page 28, lines 12-17; above with respect to claims 22-32; and in originally filed Figures 6 and 7.
Claim 44-54	Support can be found, e.g., at page 28, lines 12-17; above with respect to claims 22-32; and in originally filed Figures 6 and 7.
Claim 94	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in originally filed Figures 6 and 7.
Claim 95	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in originally filed Figures 6 and 7.
Claim 96	Support can be found, e.g., at page 6, lines 18-25; at page 20, line 27 through page 21, line 18; at page 26, line 16 through page 27, line 7; at page 10, lines 23-27; and in originally filed Figures 6 and 7.
Claims 98-104	Support can be found, e.g., at page 28, lines 12-17; above with respect to claims 91-97; and in originally filed Figures 6 and 7.
Claims 105-111	Support can be found, e.g., at page 28, lines 12-17; above with respect to claims 91-97; and in originally filed Figures 6 and 7.

VI. ISSUE(S) PRESENTED FOR REVIEW

1. Whether claims 25-28 and 94-96 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 3,312,583 (Rochlis '583).
2. Whether claims 20, 21, 33, 34, 36-45, 47-54, 98, 99, 101-106, and 108-111 are anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 3,312,583 (Rochlis '583).
3. Whether claims 17, 20, 21, 33-54, and 98-111 are obvious under 35 U.S.C. § 103 over U.S. Patent No. 3,312,583 (Rochlis '583).

4. Whether claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 are obvious under 35 U.S.C. § 103 over U.S. Patent No. 3,312,583 (Rochlis '583).

Appellants do not wish to appeal the provisional obviousness-type double patenting rejection of the claims over the continuation (U.S. Patent Application Serial No. 09/955,604) of the present application in view of Rochlis '583. In fact, Appellants acknowledge the pending provisional obviousness-type double patent rejection over copending Application No. 09/955,604. After patentability of the instant invention is confirmed, a Terminal Disclaimer will be filed if such a rejection is maintained. This is not an admission that a Terminal Disclaimer is necessary; rather, Appellants will make such a submission merely to expedite prosecution.

VII. GROUPING OF CLAIMS

For the purpose of this appeal, claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 stand or fall together.

VIII. ARGUMENT

A. Claims 20, 21, 25-28, 33, 34, 36-45, 47-54, 94-96, 98, 99, 101-106, and 108-111 are not anticipated under 35 U.S.C. § 102(b) by Rochlis '583.

The standard for anticipation is one of strict identity. "It is axiomatic that for prior art to anticipate under § 102 it has to meet every element of the claimed invention" Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

"In determining that quantum of prior art disclosure which is necessary to declare an appellant's invention 'not novel' or 'anticipated' within section 102, the stated test is whether a reference contains an 'enabling disclosure'" In re Hoeksema, 399 F.2d 269, 158 U.S.P.Q.

596, 600 (CCPA 1968). "A reference contains an 'enabling disclosure' if the public was in possession of the claimed invention before the date of invention." M.P.E.P. § 2121.01.

1. Rochlis '583 does not disclose every element of the claimed invention.

Each of Appellants' independent claims recites a production tool for manufacturing an abrasive article having a plurality of cavities, each of which has a single opening. In contrast, the mold disclosed in Rochlis '583 requires a laminate construction with multiple openings (i.e., openings between the layers in addition to the opening through which mold material enters the cavity) (col. 3, lines 40-49). Specifically, these openings between the mating surfaces of the laminations allow that "air or gas evolved in the molding or hardening procedure may escape" (col. 13, lines 70-73). There is no disclosure in Rochlis '583, however, that any cavity, let alone each of the cavities, has only a single opening. That is, there is no disclosure that Rochlis '583 has laminated mold constructions without openings between the mating surfaces of the laminations. Furthermore, there is no disclosure that Rochlis '583 has mold constructions with a single opening in each cavity.

Each of Appellants' independent claims recites a production tool for manufacturing an abrasive article, wherein the production tool has a plurality of cavities, each of which has a single opening. Appellants' claims recite that each cavity has a single opening. According to the Random House College Dictionary, "single" is defined as "one only; only one in number" (a copy enclosed, see Appendix XXIII).

In contrast, the mold disclosed in Rochlis '583 requires a laminate construction with multiple openings (i.e., openings between the layers in addition to the opening through which mold material enters the cavity) (col. 3, lines 40-49). Specifically, these openings between the mating surfaces of the laminations allow that "air or gas evolved in the molding or hardening procedure may escape" (col. 13, lines 70-73). There is no disclosure in Rochlis '583, however, that any cavity, let alone each of the cavities, has only a single opening. That is, there

is no disclosure that Rochlis '583 has laminated mold constructions without openings between the mating surfaces of the laminations. Furthermore, there is no disclosure that Rochlis '583 has mold constructions with cavities having a single opening.

Appellants also traverse the Examiner's assertion that the vent openings are not part of the mold cavities, simply because they do "not perform any shaping function" (page 10 of the Examiner's Answer, Appendix XVII). Rochlis '583 clearly states that the vent openings are provided to prevent entrapment of gas "in the mold cavity in a manner to possibly alter the shape or size of the pile elements" (column 3, lines 47-48). In other words, the vent openings allow gas to escape from the cavities to allow them to fill properly. As a result, any assertion that the vent openings are not located in the cavities is simply not supported by Rochlis '583 and must be withdrawn.

In response to the Examiner's statement at page 13 of the Examiner's Answer (see Appendix XVII) that Rochlis '583 does not disclose that allowing air or gas to escape is critical or required for the operation of the apparatus, Appellants disagree. At column 14, lines 19-26, Rochlis '583 states that allowing air and gas to escape is an "important aspect" of the invention and that no gas can accumulate in "any embodiment":

An important aspect of the present invention, in regard to method and apparatus, resides in the fact that the assembly of a lamination of notched mold plates permits air or other gas to escape during the molding and setting operation. Thus, there is no possibility of such gas accumulation tending to mar the individual outlines of the pile elements or components, in any embodiment of the product (emphasis added).

Furthermore, Appellants respectfully submit that it is inappropriate for the Examiner to allege that a positive teaching of embodiments with a single opening results from the use of the phrase "most embodiments" in the context of permitting air or gas to escape (column 3, lines 40-46 of Rochlis) and the term "may" in the context of air or gas escaping

(column 13, lines 70-75). That is, it is inappropriate for the Examiner to take these statements out of context and necessarily interpret them to mean that "in the embodiments (in opposition to 'most embodiments') where there are no openings to permit air or other evolved gas to escape, each cavity has a single opening" (page 11 of Examiner's Answer, Appendix XVII).

It is respectfully submitted that the entire document must be read for a positive teaching of the "embodiments in opposition to most embodiments." There is no such teaching. Rochlis '583 does not disclose any embodiments of mold constructions that would not be laminated and that would not have openings between the mating surfaces of the laminations. Thus, the Examiner's assertion at page 12 of the Examiner's Answer (Appendix XVII) that Rochlis '583 "is enabling for making a laminated mold or production tool without vent openings which would define each mold cavity with a single opening" must be withdrawn.

2. Rochlis '583 does not contain an enabling disclosure.

As stated above, Rochlis '583 does not disclose a production tool with any cavity, let alone each of a plurality of cavities, having only a single opening. Furthermore, Rochlis '583 does not teach how one of skill in the art would make a production tool for manufacturing an abrasive article with even one cavity having a single opening in each cavity. Rochlis '583 is enabling for a laminated mold construction that includes openings between the mating surfaces of the laminations. There is no enabling disclosure in Rochlis '583 of how one of skill in the art would make a mold or production tool with only a single opening in each cavity

B. Claims 17, 20, 21, 25-28, 33-54, 94-96, and 98-111 are not obvious under 35 U.S.C. § 103 over Rochlis '583.

"When applying 35 U.S.C. § 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
-

- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (D) Reasonable expectation of success is the standard with which obviousness is determined." M.P.E.P. § 2141 (citations omitted).

1. Rochlis '583 does not teach or suggest the claimed invention.

Rochlis '583 does not explicitly teach or suggest a production tool with any cavity having only a single opening, let alone each of a plurality of cavities having only a single opening. Furthermore, Rochlis '583 does not explicitly teach or suggest how one of skill in the art would make a production tool for manufacturing an abrasive article with a cavity having a single opening in each cavity. Rochlis '583 teaches how to make a laminated mold construction with openings between the mating surfaces of the laminations. From the disclosure of Rochlis '583, one of skill in the art would not know how to make a mold with only a single opening in each cavity.

Appellants also submit that the Office Action (Appendix X) fails to establish a prima facie case of obviousness as no motivation is identified as to why one of skill in the art would modify the teachings of Rochlis '583 to reach the claimed invention.

Rochlis '583 does not explicitly teach or suggest a production tool with any cavity having only a single opening, let alone each of a plurality of cavities having only a single opening.

The Examiner stated at pages 12-13 of the Examiner's Answer (Appendix XVII) that "modifying the production tool of Rochlis (-583) with the alternatives disclosed by Rochlis (-583) has clear motivation since Rochlis (-583) explicitly discloses that the production tool can be modified with such disclosed alternatives." Although it is not entirely clear from the

Examiner's Answer (Appendix XVII), it is believed that these "alternatives" are those that are discussed above – "in the embodiments (in opposition to 'most embodiments') where there are no openings to permit air or other evolved gas to escape, each cavity has a single opening." Again, even in an obviousness rejection, it is inappropriate for the Examiner to make such a definitive inference from the use of the words "most" and "may" instead of depending on the specific disclosure of a description of what those "other" embodiments would be. There is no such disclosure in Rochlis '583. Thus, one of skill in the art would not be motivated to make a mold or production tool for manufacturing an abrasive article with a single opening as a result of the teachings of Rochlis '583 based on the "disclosed alternatives". This rejection must be withdrawn.

2. When considered as a whole, Rochlis '583 teaches away from the claimed invention.

"It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." In re Wesslau, 353 F.2d 238, 147 U.S.P.Q. 391, 393 (CCPA 1965). A single statement in the prior art reference should not be taken out of context and relied upon with the benefit of hindsight to show obviousness; rather, a reference should be considered as a whole. Bausch & Lomb, Inc. v. Barnes-Hind/Hycrocurve, Inc., 796 F.2d 443, 230 U.S.P.Q. 416, 419-420 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987), on remand, 10 U.S.P.Q. 2d 1929 (N.D. Calif. 1989).

One of skill in the art would not be motivated to make a mold or production tool for manufacturing an abrasive article with a single opening as a result of the teachings of Rochlis '583. In fact, one of skill in the art would expect that a mold with only a single opening in each cavity would not be functional since the openings between the mating surfaces of the laminations

allow that "air or gas evolved in the molding or hardening procedure may escape" (col. 13, lines 70-73). In effect, Rochlis '583 teaches away from Appellants' invention when its disclosure is considered as a whole.

3. It is impermissible to use hindsight as an obviousness test.

Appellants respectfully submit that the use of Rochlis '583 alone in an obviousness rejection can only occur by the impermissible use of hindsight reasoning. In order to establish a *prima facie* case of obviousness, the references must teach or suggest all the claim limitations. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 at 93 ("Focusing on the obviousness of substitutions and differences instead of on the invention as a whole, . . . was a legally improper way to simplify the difficult determination of obviousness."). One cannot "simply [to] engage in a hindsight reconstruction of the claimed invention, using the Appellant's structure as a template and selecting elements from references to fill the gaps." In re Gorman, 933 F.2d 982, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991). Further, both the suggestion for combining the teachings of the prior art to make the invention and the reasonable likelihood of its success must be founded in the prior art and not in the teachings of Appellants' disclosure. In re Dow Chem., 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988). Here, the cited art does not suggest the combination of its teachings nor does it provide a reasonable likelihood that such a combination would result in the present invention.

Appellants respectfully submit that the teachings of Rochlis '583 are woefully inadequate to teach or suggest any mold or production tool for manufacturing an abrasive article, wherein the tool has a plurality of cavities, each of which as a single opening. Impermissible hindsight was used to sift through the prior art in order to reconstruct the claimed invention using Appellants' specification as a template for selecting a particular teaching.

Furthermore, there is simply no teaching, suggestion, or incentive in Rochlis '583 to provide a motivation to modify its teachings to provide a mold or tool with cavities having

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only single openings, specifically in view of the fact that Rochlis '583 emphasizes the importance of the openings between the mating surfaces of the laminations (they allow for air or gas to be evolved in the molding or hardening procedure, col. 13, lines 70-73).

C. Summary

For the many foregoing reasons, it is respectfully submitted that *prima facie* cases of anticipation and obviousness have not been established. It is earnestly requested that the Board reverse the Examiner's rejections, and that all of the claims be allowed. Appellants acknowledge the pending obviousness-type double patent rejection over copending Application No. 09/955,604 and, after patentability of the instant invention is confirmed, a Terminal Disclaimer will be filed if such a rejection is maintained, and the § 112, second paragraph rejection will be addressed by amending the claims as suggested by the Examiner. It is assumed that Appellants would be allowed to make such amendments and file a Terminal Disclaimer if needed since the first time these rejections appeared was in the final Office Action.

Respectfully submitted,
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By their attorneys,

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Date

CERTIFICATE UNDER 37 CFR §1.10:

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By: 

Name: Rachel Englund-Grahn

(LARGE ENTITY TRANSMITTAL UNDER RULE 1.10)